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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/037,755	10/22/2001	Young-Kwon Cho	678-757 (P9993)	7574
66547	7590	12/14/2007	EXAMINER	
THE FARRELL LAW FIRM, P.C.			TRAN, KHAI	
333 EARLE OVINGTON BOULEVARD				
SUITE 701			ART UNIT	PAPER NUMBER
UNIONDALE, NY 11553			2611	
			MAIL DATE	DELIVERY MODE
			12/14/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/037,755	CHO ET AL.
	Examiner	Art Unit
	KHAI TRAN	2611

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 17 September 2007.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-18 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) 1-4 and 10-13 is/are allowed.
 6) Claim(s) 5-9, 14-18 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____

5) Notice of Informal Patent Application

6) Other: _____

DETAILED ACTION

1. The amendment filed 9/17/2007 has been entered. Claims 1-18 are pending in this Office action.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 5, 6, 7, 8, 9, 14, 15, 16, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baker et al (U.S. Pat. 6,163,563) in view of Yang et al (U.S. Pat. 6,731,674).

Regarding claims 5, 14, Baker discloses a modulator for generating a modulated pilot symbol by outputting an input pilot channel data at a designated phase according

to an information bit of the transmission data for determining the phase (col. 9, lines 37-42). Baker fails to disclose a spreader for spreading a modulated pilot symbol output from the modulator with a predefined orthogonal code.

Yang discloses an orthogonal spreader (715) for spreading a modulated pilot symbol output from the modulator with a predefined orthogonal code (a Walse orthogonal codes, see Figure 7, col. 15, lines 1-24). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the orthogonal spreader (715) for spreading a modulated pilot symbol output with a predefined orthogonal code as taught by Yang into the teachings of Baker's modulator in order to limit interference.

Regarding claims 6, 15, Baker discloses a modulator for generating a modulated pilot symbol channel data at a designated complex channel according to an information bit of the transmission data for determining the complex channel (col. 9, lines 37-42). Baker fails to disclose a spreader for spreading a modulated pilot symbol output from the modulator with a predefined orthogonal code.

Yang discloses an orthogonal spreader (715) for spreading a modulated pilot symbol output from the modulator with a predefined orthogonal code (a Walse orthogonal codes, see Figure 7, col. 15, lines 1-24). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the orthogonal spreader (715) for spreading a modulated pilot symbol output with a predefined orthogonal code as taught by Yang into the teachings of Baker's modulator in order to limit interference.

Regarding claims 9, 18, Baker discloses a modulator for generating a modulated pilot symbol by outputting an input pilot channel data on a designated complex channel according to an information bit of the transmission data for determining the complex channel (col. 9, lines 37-42). Baker fails to disclose a spreader for spreading a modulated pilot symbol output with a predefined orthogonal code selected according to the information bit, from a plurality of orthogonal codes.

Yang discloses an orthogonal spreader (715) for spreading a modulated pilot symbol output with a predefined orthogonal code selected according to the information bit, from a plurality of orthogonal codes (a Walsh orthogonal codes, see Figure 7, col. 15, lines 1-24). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the orthogonal spreader (715) for spreading a modulated pilot symbol output with a predefined orthogonal code as taught by Yang into the teachings of Baker's modulator in order to limit interference.

Claims 7, 16 are similar to claim 9. Therefore, claims 7, 16 are rejected under a similar rationale.

Claims 8, 17 are similar to claims 5, 9. Therefore, claims 8, 17 are rejected under a similar rationale.

Allowable Subject Matter

5. Claims 1-4, 10-13 are allowed.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHAI TRAN whose telephone number is (571) 272-3019. The examiner can normally be reached on 7:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Payne can be reached on (571) 272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Khai Tran
Primary Examiner
Art Unit 2611